



COUNTY OF SAN DIEGO
Great Government Through the General Management System – Quality, Timeliness, Value
DEPARTMENT OF HUMAN RESOURCES

CLASS SPECIFICATION

CLASSIFIED

ASSISTANT PLANT PATHOLOGIST/NEMATOLOGIST
PLANT PATHOLOGIST/NEMATOLOGIST

Class No. 005419
Class No. 005420

■ CLASSIFICATION PURPOSE

To perform professional laboratory and field work concerning the diagnosis of plant diseases and the identification and classification of nematodes and other plant pathogens; to advise on methods of detection, control, and eradication of plant diseases and nematodes; and to perform related work as required.

■ DISTINGUISHING CHARACTERISTICS

Positions allocated to these classes are found only in the Department of Agriculture, Weights & Measures. Plant Pathologists/Nematologists are responsible for diagnosing plant diseases and identifying and classifying nematodes and other plant pathogens.

Assistant Plant Pathologist/Nematologist:

This is the entry-level class in the Plant Pathologist/Nematologist series. Under direct supervision, an Assistant Plant Pathologist/Nematologist performs laboratory and field work in identifying plant pathogens and nematodes.

Plant Pathologist/Nematologist:

This is the journey-level class in this series. Under general supervision, a Plant Pathologist/Nematologist works independently in identifying plant pathogens and nematodes, acting as liaison with outside agencies, and conducting training programs and seminars. This class differs from the next higher level, Supervising Plant Pathologist/Nematologist, in that the latter has administrative responsibility over the Plant Pathology/Nematology program and supervises subordinate Plant Pathologists/Nematologists.

■ FUNCTIONS

The examples of functions listed in the class specification(s) are representative but not necessarily exhaustive or descriptive of any one position in the class(es). Management is not precluded from assigning other related functions not listed herein if such functions are a logical assignment for the position.

Assistant Plant Pathologist/Nematologist

Essential Functions:

1. Identifies and classifies plant diseases and nematode samples by conducting inoculations, assays, isolations, statistical analyses, and other scientific laboratory tests.
2. Uses laboratory equipment such as a microscope, autoclave, hot air oven, culture hood, ultra-violet lamp, pH meter, slide warmer, mist extractor, centrifuge, and other equipment.
3. Interprets microscopic examinations, maintains stock cultures, and prepares slide mounts of pathogenic organisms.
4. Utilizes identification keys to properly identify and classify nematodes and records information.
5. Participates in the County-wide nursery nematode inspection program and in other State mandated agricultural programs.
6. Assists in conducting disease and nematode surveys in commercial crop and floriculture areas of the County.
7. Advises farmers and nursery workers on control measures for nematodes and plant diseases.
8. Performs quarantine inspections of incoming plant shipments.
9. Develops inspection programs for exotic pests as needed.
10. Coordinates with state agricultural personnel regarding the status of samples, lab procedures, and required programs.

11. Assists citizens by diagnosing samples and advises on appropriate action.
12. Reviews scientific journals and other literature to learn and provide information on new developments in the area of Plant Pathology/Nematology.
13. Represents the department at meetings.
14. Prepares reports.
15. Acts as back up in the absence of the Plant Pathologist/Nematologist.
16. Provides responsive, high quality service to County employees, representatives of outside agencies, and members of the public by providing accurate, complete, and up-to-date information in a courteous, efficient, and timely manner.

Plant Pathologist/Nematologist

Essential Functions:

All the functions listed above and

1. Provides information and advises staff, outside agencies, and the public on plant diseases and nematodes and the use of herbicides, fungicides, fumigants, and bactericides for controlling plant disorders.
2. Participates in task forces or multi-agency committees in the area of plant pathology.
3. Performs field and nursery inspections and prepares reports.
4. Maintains records and files on laboratory examinations and diagnoses.
5. Conducts training seminars or formal training programs for Agriculture staff and other departments or agencies.
6. Provides technical assistance to subordinate laboratory staff and assists with the development and implementation of Plant Pathology/Nematology programs.

■ KNOWLEDGE, SKILLS, AND ABILITIES

Knowledge of:

The following apply to both classes:

- Scientific investigative procedures and techniques used to isolate, identify, evaluate, and classify plant diseases, nematodes, and other pathogens such as viruses, fungi, and bacteria.
- Laboratory equipment utilized to identify plant pathogens, including electron, dissection, and compound microscopes, pH meter, incubator, autoclave, mist extractor, centrifuge, culture hood, and ultraviolet lamp.
- Proper lab procedures, including the use and preparation of culture medias and sterilization methods.
- Methods used to prevent, control, and eradicate nematodes and plant diseases.
- Herbicide, fungicide, fumigant, and bactericide usage and application.
- Species of common and recognizable nematodes and their characteristics.
- The relationships of plants, plant pests, and pest control to agriculture and the environment.
- Distinctions between environmental and physiological symptoms of plants.
- Agricultural, horticultural, and native plants and related nomenclature.
- Literature sources pertaining to plant pathology and nematology.
- Agricultural methods and marketing procedures.
- County customer service objectives and strategies.

Plant Pathologist/Nematologist (in addition to the above):

Skills and Abilities to:

The following apply to both classes:

- Correctly identify and diagnose plant disease, nematode, and pathogen samples.
- Properly utilize a wide range of laboratory equipment including compound and electron microscopes.
- Effectively accomplish the goals of state-mandated agricultural programs related to plant pathology and nematology.
- Perform on-site field visits to assess plant problems and recommend appropriate control measures.
- Establish and maintain effective working relationships with state and County agricultural personnel, farmers, nursery workers, and the public.
- Communicate effectively orally and in writing.

- Establish effective working relationships with management, employees, employee representatives, and the public representing diverse cultures and backgrounds.
- Treat County employees, representatives of outside agencies, and members of the public with courtesy and respect.
- Assess the customer's immediate needs and ensure customer's receipt of needed services through personal service or referral.
- Exercise appropriate judgment in answering questions and releasing information; analyze and project consequences of decisions and/or recommendations.

Plant Pathologist / Nematologist (in addition to the above):

- Prepare and conduct training seminars for staff, other agency members, and interested parties.
- Assist in the development and implementation of training programs that instruct personnel in methods of detecting and identifying plant diseases and pathogenic organisms.
- Assist in evaluating and developing laboratory procedures.

■ EDUCATION/EXPERIENCE

Education, training, and/or experience that demonstrate possession of the knowledge, skills, and abilities listed above. Examples of qualifying education/experience are:

Assistant Plant Pathologist/Nematologist:

1. A bachelor of science degree in one of the biological sciences, with emphasis on courses in plant pathology, nematology, mycology, bacteriology, and virology, AND, one (1) year of experience working in a plant pathology lab that must have included the use of identification keys to identify plant parasitic nematodes.

Plant Pathologist/Nematologist:

1. A bachelor of science degree in one of the biological sciences, with emphasis on courses in plant pathology, nematology, mycology, bacteriology, and virology, AND, two (2) years of experience performing laboratory examinations and analysis in identifying and diagnosing the presence of plant pathogens and nematodes, OR
2. One (1) year of experience as an Assistant Plant Pathologist/Nematologist with the County of San Diego.

■ ESSENTIAL PHYSICAL CHARACTERISTICS

The physical characteristics described here are representative of those that must be met by an employee to successfully perform the essential functions of the classification(s). Reasonable accommodation may be made to enable an individual with qualified disabilities to perform the essential functions of a job, on a case-by-case basis.

Continuous upward and downward flexion of the neck. Frequent: sitting, repetitive use of hands. Occasional: walking, standing, bending and twisting of neck, bending and twisting of waist, squatting, simple grasping, reaching above and below shoulder level, and lifting and carrying of objects weighing up to 10 pounds.

■ SPECIAL NOTES, LICENSES, OR REQUIREMENTS

License

A valid California class C driver's license, which must be maintained throughout employment in this class, is required at time of appointment, or the ability to arrange necessary and timely transportation for field travel. Employees in this class may be required to use their own vehicle.

Certification/Registration

Incumbents must possess licenses in the two following Agricultural Biologist (Inspector) categories as issued by the Director of the California Department of Food and Agriculture: 1) Plant Quarantine and Pest Detection, and 2) Nursery and Seed Regulation.

Working Conditions

Office and laboratory environment. May require walking on uneven ground, exposure to extremes in temperature, humidity, or wetness, exposure to dust, gas, fumes, or chemicals, working at heights, and working with biohazards during field surveys or inspections.

Background Investigation

Must have a reputation for honesty and trustworthiness. Misdemeanor and/or felony convictions may be disqualifying depending on type, number, severity, and recency. Prior to appointment, candidates will be subject to a background investigation.

Probationary Period

Incumbents appointed to permanent positions in these classes shall serve a probationary period of 6 months (Civil Service Rule 4.2.5).

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Assistant Plant Pathologist/Nematologist (Class No. 005419)
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Variable Entry: Y
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